
EPA PUBLIC MEETING
GULFCO MARINE MAINTENANCE SUPERFUND SITE
FREEPORT, BRAZORIA COUNTY, TEXAS
AUGUST 4, 2011
HELD AT VELASCO COMMUNITY HOUSE



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1 MR. SANTOS: Good evening. It guess we're
2 ready to start the public meeting for the Gulf Superfund
3 site. We appreciate all of you that are attending this
4 meeting and taking time to be here. My name is Carlos
5 Santos. I'm chief of Arkansas/Texas Superfund section.

6 We have Gary Miller, the RPM for the
7 site. He will be making a short presentation on the
8 site; and then, afterwards we will take comments and
9 questions. We will have a court reporter that will take
10 all the comments and questions that, you know, are made
11 at this public meeting; and we'll go to the questions and
12 comments. But then we'll make a formal response in what
13 we call a response summary. That is part of the record
14 decision for the site.

15 We want to recognize a few other people
16 that are here in attendance. From the Texas Commission
17 of Environmental, we have Lou Vasquez, Michael
18 Montgomery. Also from the Texas Department of Health or
19 Texas Services, we have Dr. Carrie Bradford, Tina Walker
20 and David Rivera.

21 Also from the City, we have Jeff Pynes,
22 city manager. Thank you.

23 Do we have other representatives from
24 the city here with us?

25 MR. PYNES: We have Councilwoman Nicole



1 Mireles. She's our mayor pro tem as well.

2 MR. SANTOS: Welcome.

3 MR. PYNES: And our fire chief and
4 emergency manager coordinator and EMS director and my
5 assistants, also.

6 MR. SANTOS: Okay. Well, thank you all for
7 being here. We appreciate you being here and
8 participating in this public meeting. So, we'll get
9 started. I guess Gary will make a short presentation,
10 and then we'll get to the questions and answers.

11 This public meeting is mainly to hear
12 your comments, concerns, recommendations, questions. So,
13 that's really the purpose of this public meeting, to get
14 input from the community; but Gary will make a short
15 presentation on the site.

16 MR. MILLER: Thank you. Hello, everybody.
17 I appreciate you coming out tonight and showing interest
18 in the site. This is the Gulfco Superfund Site, Gulfco
19 Marine Maintenance, and we're going to talk about the
20 investigations that were done out there, what the results
21 were, what the examination is and what the risks that
22 were identified. After that we're going to talk about
23 what the clean-up objectives are and then the
24 alternatives for cleaning up the site.

25 Here's a map of the site, and it's



1 located -- Gulfco is located -- there's the site and it's
2 right on the north side of the intercostal waterway. And
3 the City of Freeport is over in this area. Here's
4 Surfside. Of course, the Gulf of Mexico is down here.

5 Here is a more close-up map of the
6 site, and it shows a couple of areas I wanted to point
7 out to you folks.

8 This area right down here is a former
9 storage tank area, and those tanks were removed this
10 year. And so, I'll talk a little bit more about that
11 later. And then, this area up here is a former surface
12 impoundment area. Those surface impoundments were used
13 for storage to wash waters from the barge cleaning
14 operation. They were closed approximately 30 years ago
15 in 1982, but we'll be talking about that. That will be
16 part of the remedy. We will get into later.

17 Okay. As far as the site history, the
18 address is 906 Marlin Avenue in Freeport. The site
19 covers about 40 acres. The main operation at the site
20 was barge cleaning and repairs and that ran for almost 30
21 years from '71 to almost 2000. The barges contained a
22 large number of chemicals -- oils, caustics, chlorinated
23 solvents, a large number of different things. And as I
24 said before, the washwaters from cleaning those barges
25 are stored in those impoundments north of Marlin Avenue.



1 All right. Here's some of the history
2 of it. August '82, the former impoundments were closed
3 under state-approved plan. In 2003, the Gulfco site was
4 add to the superfund list. That's a national priorities
5 list, NPL. In 2005 EPA issued an order to the
6 potentially responsible parties to require an
7 investigation and feasibility study.

8 Now, we're -- that investigation has
9 been completed and has the feasibility study. So, what
10 we're going to talk about tonight is the results from
11 that and proposed remedy that came out of the feasibility
12 study.

13 Okay. This is just a quick slide to
14 show the superfund process. First of all, the site is
15 listed, which was done in 2003. But the first thing is
16 the remedial investigation, and that's been done.
17 Following the investigation, risk assessments are done;
18 and then, a feasibility study is done to identify what
19 the clean-up considerations might be.

20 Well, following that, a proposed plan
21 is developed which summarizes all of that previous
22 information. It's put out for public comment, and that's
23 the purpose of this meeting right here is to receive
24 comment on that proposed plan. And then, at the end of
25 the comment period, we'll consider those public comments



1 along with all the other information we have from the
2 site and we'll issue a record of decision and that's
3 where the final clean-up remedy is selected for the
4 site.

5 All right. So, we'll start off with
6 the remedial investigation. There were a lot of samples
7 collected at the site -- soils, groundwater, surface
8 water, sediments. There's also some fish sampling. Just
9 in general -- I'll get more into the contaminants later,
10 but there are a large number. Some of the main ones were
11 the chlorinated solvents. That's trichloroethylene --
12 Tetrachloroethylene, which is a dry cleaning fluid, and
13 trichloroethylene.

14 All right. Now, I'm going to just
15 briefly talk about the sampling was done; and by the way,
16 this poster over here shows the site and all the samples
17 that were collected. So, there were a lot of samples
18 collected.

19 But anyway, for the soil and sediment,
20 over 300 samples were collected. They found PCBs,
21 metals, various things in some of the samples. In some
22 of the samples there were no detects. Contamination
23 reaches down to about 5 feet.

24 And one other thing I wanted to
25 mention, over on the eastern end of the site, there were



1 additional samples collected from zero to one inch. I
2 know one of the concerns of the community was the
3 windblown dust. So, that was the purpose of those
4 shallow samples, to see if there's anything in that
5 shallow soil that maybe could be picked up.

6 Okay. Here's Marlin Avenue. Here's
7 the intercostal waterway, and this the southern part of
8 the site that covers about 20 acres. It's really hard to
9 see; but if y'all can kind of see all these black dots,
10 what those are, those are all the sample locations. So,
11 there was a pretty fair coverage there. Those samples
12 were taken in the top 6 inches between 1 and 2 feet and
13 also in some areas between 4 and 5 feet. So, kind of get
14 the spread of what is there.

15 All right. This is the area between
16 Bridge Harbor which is right over here, and here's the
17 Gulf Coast side over here. So, these were two tracts in
18 here that were sampled. These samples in this area went
19 down to 2 feet, but most of these samples over here were
20 in the top 1 inch looking for that windblown dust. And
21 what we did is we looked over here on the side at the
22 source areas like there are some sandblasting areas and
23 the shallow soil over here and the main thing we found
24 there was lead. So, we came over here; and we looked for
25 lead. And what we found out is most of the levels were



1 very low, like, for instance, these samples over here on
2 this side next to Bridge Harbor were all less than 20.
3 And just to kind of put that in perspective, our spring
4 level and clean up level is somewhere between four and
5 500. Typically we don't clean up a site, a residential
6 site, if it's less than 500. So, none of these samples
7 were above 500. Most were very much lower. So, that's
8 just kind of what we found there.

9 Okay. This is the northern area.
10 Here's Marlin Avenue and this is another 20 acres north
11 Marlin. Most of this area is wetlands. There's the
12 former impoundments. Again, these black dots are really
13 hard to see; but those were the sample locations. There
14 are some outside of the Gulfco property, some out here
15 and some out here as well. There are a number scattered
16 throughout this area.

17 This is a -- actually it's a brackish
18 pond. It's about 4 feet deep. It's called a freshwater
19 pond, but basically it is brackish.

20 Okay. Next I'm going to say a little
21 bit about the groundwater investigations, and this is
22 putting in the groundwater monitoring well. This looks
23 like it's in the marsh north of Marlin Avenue.

24 So, on the groundwater there were 30
25 monitoring wells put in and 13 piezometers. Piezometers



1 were used to measure the water level so we could get the
2 directional flow.

3 But anyway, what was found, there were
4 three water bearing zones at least in the shallow part of
5 it. Zone A was about 10 feet below the ground surface.
6 The next one, Zone B, was about 19 feet down and the last
7 one, Zone C, was 73 feet down. Now, these first two were
8 silt and sand; but Zone C is really just kind of a
9 crushed shell layer. It's only about one foot thick.

10 The one thing I wanted to point out,
11 there's a thick low permeability clay layer between
12 Zones B and C. So, what that would do, that thick clay
13 layer in between here would prevent any deeper
14 migration. I will just tell you right now there is
15 contamination in Zone A. That is the most expensive
16 contamination. There is a much smaller area of
17 contamination in Zone B.

18 The other thing I wanted to say is all
19 of three of these water zones are salt water. Their
20 total dissolved solvents is greater than 30,000. So,
21 it's not part of the water by any means.

22 All right. Most of the contaminants
23 found were chlorinated solvents again and benzene. One
24 of the concerns was because of the -- a lot of these
25 materials are heavy. They are dense, and they will sink



1 through groundwater. So, one of the concerns is the
2 non-aqueous phase liquid, or NAPL, might sink through the
3 bottom of those zones and create a continuing source.

4 So, anyway, in the course there were some I'm going to
5 call them end zones of DNAPL, or dense NAPL, discovered
6 at the bottom of Zones A and B. One thing that was
7 encouraging is that in all those water wells, there was
8 no NAPL observed. Now, some of these wells did have high
9 concentration of contaminants in the water samples; but
10 there was no free phase of these chemicals in those
11 wells. So, what that means is at least in those areas
12 there, it wasn't mobile enough to go in those wells.
13 That's a good sign.

14 Okay. This map -- again, I apologize
15 is hard to see but all these dots over here show all
16 groundwater monitoring wells that are put in around the
17 site and those three zones. Most of the wells were
18 concentrated up there in the northern area because that's
19 where the ground water plumes were found. The plumes did
20 come from these former impoundments.

21 So, now, this map shows the area of
22 contamination. This is the groundwater plume and
23 Zone A. There is a small -- much smaller area in Zone B
24 that's within this area. But this is -- this is what
25 we're looking at. It's all north of Marlin Avenue. And



1 the other thing I wanted to say is these impoundments
2 were put in there almost 40 years ago, and they were
3 closed almost 30 years ago. So, this area is -- that's
4 all the migration that has happened over the last 30 to
5 40 years.

6 All right. This slide shows the
7 groundwater surface in the A zone, and the thing I wanted
8 to pound out with this is groundwater moves. And what
9 this is telling us is right here there's a groundwater
10 divide, a high point in the groundwater. And north of
11 this, it's flowing up to the north or to the west. And
12 then south of that, it's flowing to the south towards the
13 intercostal waterway. Now, the data for this was in
14 December of 2007; and the thing about these groundwater
15 flow directions, they do change.

16 Here's the same area six months later,
17 and this was during a dry spell. What I wanted to point
18 out here is before if you notice the groundwater is
19 flowing to the intercostal. Here it's flowing out of the
20 intercostal to the north. So, the main thing there is
21 the concerns of that contaminant plume that we saw
22 several slides back. So, to the extent that the
23 groundwater is flowing to the intercostal, that's a
24 concern because we don't want that plume to get to the
25 intercostal. This type of stuff is helping us. It may



1 be one of the reasons why the plume hasn't moved any
2 farther than it has, because at times the flow is
3 reversed.

4 Okay. There are another -- other
5 investigations that were done, sediments from around the
6 intercostal waterway of the surface water. The other
7 thing I'll be talking about here in just a little bit is
8 the fish and crab investigation. There were 33 samples
9 collected of red fish, specks, flounders and blue crabs
10 and around the site within the barge slips; and basically
11 we didn't find anything, very low levels. And before I
12 get into that, I did want to say, the ecological
13 investigation; and what that consisted of is 25 toxicity
14 tests. And I will get into that in a little bit.
15 Basically that's where we take an area that we think has
16 some contamination in it, and we put either worms or
17 small crustaceans in there and see how they do. So,
18 that's what those toxicity tests were.

19 This is a picture of -- it's a gill net
20 of collecting the fish samples out in the intercostal
21 waterway.

22 And this is a picture of some of the
23 fish samples. Looks these are mostly flounders. There's
24 a red fish. I'm not sure what that guy is over there.

25 Okay. So, anyway what we do with all



1 this: We get all this information, and we put a risk
2 assessments together. Now, in the case of the fish
3 sampling, the Texas Health Department also did an
4 assessment of the fish and crab data and conclusion from
5 that is they don't -- didn't expect to see any health
6 effects associated with contaminants in those fish near
7 the Gulf Coast side.

8 That's something else I should also
9 point out. There are other advisories and bans. For
10 instance, on shellfish, I believe there's a ban in the
11 area, I think, on mackerel. There's an advisory to
12 mercury, and that's spread throughout the whole Gulf
13 Coast. So, anyway that's -- that was the results of the
14 fish testing.

15 As far as the human population, we
16 looked at a lot of different scenarios -- construction
17 workers, trespassers, workers on the site -- to consider
18 if there's any risk from the chemicals at the site; and
19 the only thing that was found is if you remember that
20 groundwater plume, the chemicals do migrate and vaporize
21 out of that groundwater and rise to the surface. So,
22 while there's no current risk from that, if there were a
23 building to be constructed, those vapors would
24 concentrate in that building. And there is a risk if
25 that were done, if some building were built over that



1 groundwater plume. But as far as the soils and the
2 sediments in the groundwater, there was no risk.

3 Now, I should point out in the
4 groundwater, there were very high levels; but since it's
5 not potable. It's salt water. There's no pathway.
6 Nobody is going to be drinking it.

7 Okay. So, no other unacceptable risks
8 other than that vapor intrusion concern.

9 Okay. This is just more information
10 about the ecological risk assessments. And just
11 basically summarizing that, what we do is we do a
12 screening level risk assessment based on the soil and
13 sediment and water data. We did identify some areas that
14 were of concern. So, the next step is to take those
15 areas and do these toxicity tests; and what we found from
16 the toxicity tests is there were no difference between
17 the background levels. So, the results of that is there
18 was no impact from the site level contaminants. So, as a
19 result, there's no issue with the environment, just the
20 human elements.

21 Okay. We did do -- I should point out
22 that all this work has been done by the responsible
23 parties under that order. So, under EPA and TWCEP
24 oversight. So, they were the ones collecting all the
25 samples and doing all this work. So, anyway here's a



1 picture of a tank farm. This shows what it looked like
2 before the work started which, I believe, was November of
3 last year. The tanks contained a number of hazardous
4 substances that were unloaded from the barges. They have
5 been there ever since the barge operation shut down.

6 But anyway, those were benzene,
7 chloroform, TCE, a lot of different other things. The
8 removal started in November of 2010; and what that
9 consisted of is the tank contents were removed, disposed
10 of off-site, hazardous waste disposal facilities. The
11 tanks were decontaminated, demolished and removed. There
12 was also some debris in there. That was also taken out
13 and then area monitoring was done. We like to be sure
14 there wasn't any vapors coming off of those tanks.

15 So, here's a picture of that. That's
16 the hydraulic shears that's ripping off one of the tanks
17 to get inside to decontaminate it. One thing we found is
18 after the tanks were gone, there was soil below the
19 tanks; and there was contamination in that soil to a
20 depth of about 6 feet. So, anyway, that soil was
21 removed. Samples were taken to confirm what the
22 remaining contaminants were. It was acceptable. So, it
23 was back filled with clean dirt. The -- there was a
24 concrete berm around the tanks. So, that was pressure
25 washed and decontaminated. And then, finally the walls



1 of the berms were breached. So, it won't continue to
2 collect rainwater. As a result of that, over 800,000
3 pounds of hazardous substances were removed in 90,000
4 gallons of water. That's what was in those tanks.

5 Anyway all that work was completed for
6 this year. And so, here's a follow-up picture. There
7 was some roll-off containers. At this point they still
8 had some waste in them, but they were subsequently
9 shipped off site. All the tanks are gone.

10 So, what that brings us to is what
11 about this remedial action? What were their objectives
12 based on all that information? Well, one thing we want
13 to do is we're concerned about that groundwater plume.
14 We don't want it to move. So, we want to confirm that
15 that plume is stable. We want to prevent any future
16 indoor exposures from any building that may be built over
17 that groundwater plume. One thing, the land is currently
18 zoned as commercial and industrial. One side, the side
19 next to the intercostal is waterfront, heavy water front
20 and this the side north of Marlin is heavy industrial.
21 So, anyway, all the risk assessments were based on using
22 those scenarios. So, we want to prevent any other use
23 than that.

24 Also, prevent groundwater use. Now,
25 that groundwater is fine. There was some concern if some



1 industrial operation came in there and should pump that
2 water for some reason, it may affect the plume
3 stability. So, we didn't want anybody pumping any of
4 that groundwater.

5 And then, finally the former
6 impoundments, there was some sludge that was left in
7 there, about 100 feet of sludge when they were closed.
8 So, there was some concern about that. Now, that's
9 currently capped. It's under 3 feet of clay, and part of
10 that clay needs to be fixed. But anyway, we do -- it's
11 part of the objective. We do want to prevent exposure to
12 that residual material, anybody that may be on the site.

13 Okay. So, as a part of that, there
14 were three remedial action alternatives worked out; and
15 that's included in the feasibility study. The first one,
16 Alternative 1, is a no action alternative. We do that
17 for all the sites, and it just says what if we don't do
18 anything? What will happen? Of course, we found out
19 that's just not acceptable. It won't meet the
20 objectives.

21 So, here's all Alternative 2.
22 Groundwater controls and monitoring. These are a summary
23 of the components for that. Basically there are
24 restrictive covenants in place that restrict the use of
25 the property and required mitigation for any buildings



1 that should be built over that plume, but they need to be
2 modified a little bit. The contaminants need to be
3 identified and the location. So, that needs to be done.

4 Also, as a part, that includes the
5 existing cap. Well, that existing cap does need to be
6 maintained. So, there needs to be an operation
7 maintenance plan to inspect and repair that thing as
8 needed. Of course, the annual groundwater monitoring so
9 we know what that plume is doing; and if it -- if we do
10 find that it moves, we can take some additional action.
11 Here's the operation and maintenance plan including the
12 groundwater monitoring; and one thing we do on superfund
13 sites where contamination is left on site, we do
14 five-year reviews. Once every five years we'll go back
15 and look at the site and look at all the data and analyze
16 it and assess it and make sure it's still protective and
17 if it's not, we will see what extract needs to be done.

18 All right. Alternative 3 that was also
19 included in the feasibility study was groundwater
20 containment. What this is, we said, "Okay. We're saying
21 that that plume hadn't moved very far in the 30 to 40
22 years. What if it does move or what if it continues to
23 move or whatever?"

24 So, this alternative is similar to the
25 last one; but it includes some extra things. That's



1 groundwater extraction wells. Basically pumping wells so
2 we can pump out the plume and keep it from moving and
3 shrink it. And then, of course, whenever you pump it,
4 then you're going to have to treat and discharge it. So,
5 you have to treat it to meet the discharge requirements.
6 So, that would be the treatment plan. The rest of these
7 other things are exactly the same as the last
8 alternative, Alternative 2.

9 All right. So, here are the costs.

10 First, Alternative 1, no action, zero cost.

11 Alternative 2, just the monitoring groundwater controls,
12 a little over \$200,000. And this is presently the most
13 likely alternative. Alternative 3, the groundwater
14 containment, it's going to be a lot more because of the
15 treatment plan and operations. That was 4.7 million.

16 All right. And superfund, we have
17 these nine evaluation criteria that we look at, at these
18 alternatives. The main thing is the alternative has to
19 be protected. It's got to comply with the laws and
20 standards that are relevant to whatever work is being
21 done. Then there's some other criterias of balancing
22 criteria, modifying criteria; but basically we look to
23 see if it's effective in the long term, if it's
24 implementable, what the cost is and some other things.
25 But also, it's important for the state acceptance and



1 community. So, that's part of the reason why we're doing
2 this.

3 All right. So, we are recommending
4 Alternative 2 is the preferred alternative. Why are we
5 doing that? As far as long-term effectiveness, it looks
6 like it's got the greater effectiveness because he don't
7 have to operate a plant; and anytime you are operating a
8 plant you are going to have downtime and treatment and
9 all that kind of stuff. Short-term effectiveness
10 basically because there's very little construction, or
11 actually no construction, that has to be done as compared
12 to Alternative 3, which, you know, the plant would be
13 built.

14 Same thing on implementability, and, of
15 course, the cost. This cost is about 1/20th of
16 Alternative 3. Now, I also need to point out this is
17 kind of predicated on the fact that the plume hasn't
18 moved very far. If we should come out at some point in
19 the future and we find the plume is moving, then all bets
20 are off; and we'll have to do something more aggressive
21 to keep it out of the water. That's what we're thinking
22 of right now.

23 Okay. So, just here's where we are at
24 right now. We're in the public comment period, and that
25 ends August 22. And we will -- we appreciate any



1 comments that we get from y'all and we'll consider those
2 and respond to them and make our decision. But the final
3 clean-up plan will be selected and the recommended
4 decision; and then, we expect the issue to arrive
5 sometime in September, or hopefully before the end of
6 September or Carlos will shoot me. That's it. Any
7 questions?

8 MR. PYNES: I have a couple. Looking at
9 the different options, if -- you can take Option 2. So,
10 basically what you're going to be creating is a dead zone
11 that can't be developed, correct? Because you say you
12 can't build a structure on it because you would have
13 indoor contaminants for human health.

14 MR. MILLER: No, you could build a
15 structure; but it would have to be mitigated. Then
16 there's a lot of technology for mitigating to make the
17 improvements like HVAC, suspend the vents in the
18 underslab. So, it has to be mitigated. It's not
19 necessarily that it can't be constructed.

20 MR. PYNES: In my perspective, it seems
21 like Option 2 is the path of least resistance instead of
22 holding the people accountable that did it and put it
23 back the way they got it. So, on Option No. 3, although
24 it's more money, they are going to be responsible for
25 cleaning it up. Wouldn't it preserve the land and the



1 subsurface back to its original quality.

2 MR. MILLER: It would and, you know, the
3 reasons we're --

4 MR. PYNES: So, really you have, in effect,
5 of affecting adjacent property owners if you only do it
6 halfway instead of doing it the right way. And you are
7 just prolonging something that most likely is going to be
8 a problem in the future.

9 MR. CASTILLE: Yeah, who decided Plan 2?

10 MR. MILLER: That was basically me.

11 MR. SANTOS: It hasn't been decided. It's
12 up for referral.

13 MR. MILLER: It's being proposed in the
14 recommendation.

15 MR. SANTOS: The decision gets made when
16 the regular decision is signed and then --

17 MR. CASTILLE: We're looking at a long-term
18 deal? It has to be monitored forever?

19 MR. MILLER: Right.

20 MR. SANTOS: As far as clean-up, I don't
21 know if you can ever return it to original conditions.
22 One of the things we look at with these alternatives is
23 that is if they're protected, which we believe
24 Alternative 2 is, and it also, you know, cost and all
25 those things get -- go into consideration. As Gary



1 indicated, there's a lot of things here that are
2 evaluated on different alternatives. We look at all of
3 those things as a preferred alternative is put forward to
4 the community. So, it's indicated the first two protect
5 the human health and environment. We believe this remedy
6 does that. The tanks and those areas have been
7 addressed. There's a cap over the material that, you
8 know, there will be exposure. The ground water is not
9 drinking water. The zone where the -- you know, it's two
10 controls are going to be required. It's -- I -- relative
11 to the size. It's a small area. So, you can develop or
12 build anywhere, even on top of that area. So, there is,
13 you know, a lot of area that can be developed if someone
14 wants to do that.

15 MR. PYNES: But realistically if I got a
16 pile of money and I want to develop it, do I want to
17 develop it next to something that could be a problem and
18 would affect my development?

19 MR. SANTOS: If there was no other land
20 available, it might be worth it. I mean --

21 MR. PYNES: Option 2 is creating a dead
22 zone.

23 MR. SANTOS: We have many other sites and
24 many other areas where, you know, vapor mitigation
25 systems are in place to prevent vapors going inside



1 buildings and house and things like that. So, those
2 systems do work; and they are being used.

3 MR. MILLER: One thing I'd like to point
4 out and get back to is that DNAPL presence, that free-
5 phase liquid that's down there in the bottom of those
6 deeper zones. We could control the plume. We could keep
7 it from moving, and we could actually shrink it. But
8 what is going to happen is that the DNAPL is going to
9 continue to dissolve and our experience has been at the
10 DNAPL sites, it's very hard to clean up those plumes.
11 So, there would be an area of contamination for probably
12 a long time.

13 Yes, it would probably be smaller; but
14 with that DNAPL continuing to dissolve in the ground
15 water, that's frankly one of the concerns about
16 Alternative 2 because it is dissolving right now. And
17 so, why has it stopped or why hasn't moved any farther
18 than it has? Well, it's a tight zone. It's got very
19 little permeability. It's not going to move very fast.
20 Another thing is that the groundwater flow changes. You
21 know, sometimes when it's dry, the actual water backs
22 up. So, that tends to push the plume back.

23 And I didn't mention this before but
24 during the investigation, there is also some biological
25 testing done to see if there's any natural biological



1 degradation; and it looks like there is. So, that may be
2 another thing that is helping us to keep that plume from
3 moving. You know, we could shrink it; but whether we
4 could actually totally remove it, it would be very tough.

5 MR. PYNES: Under Alternative 3, if you did
6 that, would it require any less mitigation for any future
7 development?

8 MR. MILLER: There would have to be vapor
9 intrusion mitigation.

10 MR. PYNES: Even with Option 3?

11 MR. MILLER: Yes, even with Option 3.

12 MR. SANTOS: Because D-NAPL materials, they
13 can be found. They move slowly, and it would take a lot
14 of pumping over many years. And, you know, even this
15 vapor potential, it's a potential. And we look at very
16 worst case scenario, we don't know for sure that would be
17 a problem if a building is located on top of this plume,
18 you know, to begin with. But we look at a worst case
19 scenario and that's why we're mentioning it as a
20 potential. We don't know for sure if that's what
21 actually happened.

22 MR. PYNES: I don't want to speak for
23 Councilwoman Mireles. I think from my perspective and
24 maybe some property there in that area, we would rather
25 the responsible party put it back the way they found it



1 and before it was contaminated. Really the money option
2 is not the state or the EPA. It's the person
3 responsible. So, that shouldn't be the ultimate decision
4 from my perspective. It should be like if you made a
5 mistake, it's your responsibility to fix it and not push
6 it down the line for somebody else to deal with it.

7 MR. SANTOS: Well, when we look at all the
8 Superfund sites, whether it's Federally-funded or
9 procurement funded, we don't really consider that. We
10 consider this protection on all of these sites. So,
11 whether -- even if the government is not paying for it,
12 we have to treat a site equally and look at it from the
13 standpoint of whether it's protecting the human health
14 and environment. That's the main criteria. Cost or who
15 pays for it, that's, you know, down the bottom of the
16 list.

17 So, we don't -- just because a site is
18 a PRP site, we don't say, well, we don't care because
19 they're paying for it. Well, that's not how we look at
20 sites. We look at the -- the main thing is for the site
21 to be protected and we believe that that is the case on
22 that for Alternative No. 2.

23 MR. PYNES: Alternative No. 2 and the
24 five-year testing, who is responsible for that, the
25 responsible parties, for the testing themselves.



1 MR. SANTOS: No. The EPA makes the final
2 determination. They gather the data. EPA puts together
3 the report and makes the determination whether it's
4 protected or not. So, be -- they may be gathering the
5 data information; but they don't make the decision or the
6 selection of the remedy for the site. They work together
7 with the state. So, they may be doing the work or
8 gathering information; but the EPA with the state makes
9 those decisions. And again, the five-year review is to
10 fully evaluate the remedy. If at the five-year review,
11 something is happening that we didn't anticipate, we can
12 change it. We can do it where we basically start it all
13 over and select some other remedy that would address
14 whatever the issue is.

15 MR. PYNES: How long has it been there?

16 MR. MILLER: They started in '71, I think.

17 MR. PYNES: That's kind of my point. It's
18 been there since '71. I just think it should be cleaned
19 up personally. I mean, I love the environment. I love
20 the outdoors. I love the coastal environment that our
21 community has to offer; but when you throw that in the
22 mix, it doesn't just have an effect on the site, it's
23 going to have an effect on anybody that learns about the
24 site and they know Freeport has got these things or
25 whatever it is. I think overall it's a detractor for the



1 environment that we have.

2 MR. SANTOS: We'll consider your comments
3 and your recommendations along with, you know, others
4 that we receive and, you know, whatever. Also, you know,
5 people can also mail us. If they don't want to speak up
6 here at the meeting, they can send you us comments, you
7 know, up to the August 22nd and all of those things will
8 be considered together and then we'll present -- and if
9 you need more information, you know, once the decision is
10 made on what -- why we chose whatever alternative we
11 selected as the record decision.

12 MR. PYNES: Is there another meeting that
13 will be in Austin somewhere that will present the final
14 decision?

15 MR. SANTOS: No, we don't have another
16 meeting after this.

17 MR. PYNES: Okay.

18 MR. SANTOS: And the decision or selection
19 will be placed -- I believe the notice is paid for or
20 printed in the newspaper that announces the final
21 decision that's made.

22 MR. PYNES: Okay.

23 MR. CASTILLE: Gary, let me ask you a
24 question: I don't notice any newspaper here. Did y'all
25 get ahold of them, by any chance?



1 MR. MILLER: There was two newspaper ads
2 that were put out about this meeting, and there was also
3 a press release that was sent around to the media.

4 MR. CASTILLE: I'm surprised they're not
5 here. This has been -- this has been headlines.

6 MR. PYNES: Well, they might not want to be
7 here because this is something positive to resolve
8 something.

9 MR. CASTILLE: Along with some other
10 issues. But years ago they did headlines on this, you
11 know; and now you don't see anything. A Superfund Site
12 is a major issue, you know, around the country; and we --
13 let's say at first we got all the PR, if you want to call
14 it PR, on this project, heavy, heavy, you know,
15 headlines. And now, lately we hear nothing. We don't
16 even have the residents here from Bridge Harbor.

17 MR. PYNES: We sent out a message to
18 everybody within a radius of this site and notified them
19 of the message.

20 MS. MIRELES: He sent out the message.

21 MR. CASTILLE: Did the message go out over
22 the telephone? Of course, we have some absentee people
23 and people that live there.

24 MR. PYNES: People update their information
25 on the CT website for the city, and we sent it out TO



1 everybody in close proximity.

2 MR. MILLER: You know, we did mail out the
3 notice; and I do know a number of people didn't get it.
4 Some did, and some didn't. You know, it was mailed out
5 on the 22nd. I guess we needed to -- should have mailed
6 it out earlier.

7 MR. CASTILLE: I passed it out myself.
8 People don't care. It's not hard to figure out.

9 MR. DAVIS: I'm curious. Obviously these
10 things happen all over the nation, and you kind of go
11 from site to site. I'm assuming that they all generally
12 have the same option of do nothing, go all the way or go
13 somewhere in the middle. I'm curious if you have any
14 statistics on, say, in the last 15 years how many sites
15 there have been, how many took the middle of the road and
16 how many have had maybe three five-year periods and found
17 that it didn't work and we had to go all the way anyway.

18 MR. MILLER: Carlos is our national --
19 maybe I shouldn't say this. I don't have any statistics,
20 but maybe he has some.

21 MR. SANTOS: It varies. I mean, it varies
22 throughout the country; and if this ground water
23 contamination was in a potential drinking water source,
24 we would be pumping it right now. So, it makes a
25 difference on what the environment is and how the plume



1 is moving. If it was moving and you had residential
2 private wells close by. So, it depends on the situation,
3 not just the contamination you have. It is the
4 environment around the -- the plume and where it's
5 headed. So, this has been done similar to this in other
6 locations, this type of remedy where it is -- if the
7 plume is not expanding or moving and it's considered
8 stable, as this is because it's been there for 30 years
9 and you have a clay layer that is not going to a deeper
10 zone. So, all of those -- and it varies throughout the
11 country.

12 So, this remedy has been selected at
13 other locations; and some of them, they pump and do NC2,
14 you know, stabilization. I mean, it varies. It varies
15 throughout the country. So, it's hard to compare this
16 situation to something else because even on the other
17 areas that are selected similar to this, it was maybe
18 done for a different reason.

19 MR. CASTILLE: Can you put two back up
20 there again? Can you flash two back up there again?

21 MR. PYNES: Based on the contamination by
22 the responsible parties, were there any fines levied for
23 the contamination?

24 MR. SANTOS: We don't issue fines in the
25 Superfund. The fines are generally issued when the



1 facilities and operation and they, you know, caused this
2 or are not maintaining --

3 MR. PYNES: So, if you contaminate and get
4 out of town, you're in good shape.

5 MS. MIRELES: Yeah.

6 MR. CASTILLE: I can answer the question.

7 MR. SANTOS: No, they have -- you know,
8 they clean up the tanks. They are paying for EPA to do
9 all this work. They are paying for all the sampling.
10 They will be paying to monitor the sites. I don't
11 think -- I don't see it as, you know, get out of jail
12 type card. I mean, there is --

13 MR. PYNES: I was curious because I talked
14 to other industries in our area, a couple of others, that
15 have had strong fines levied by the state monitoring
16 their activities. I was wondering if they have done
17 something wrong or are they being held accountable.

18 MR. CASTILLE: I can answer your question
19 going back 10 years ago. The DA only fined Hercules I
20 think it was \$10,000, to give an example.

21 MR. PYNES: Okay.

22 MR. CASTILLE: Couldn't have been, I think,
23 3 million or something like that. They got off paying
24 10,000, to give you a little background there. It wasn't
25 their deal. That was the state's deal.



1 MR. SANTOS: I mean, all situations are
2 different. Here you may have had an operator that, you
3 know, improperly disposed of waste materials. The people
4 that are paying for the clean-up are not the people that
5 are operated or were involved with how the facility
6 operated. There are people that maybe took barges to get
7 cleaned up that they, I assume, thought it was a
8 legitimate business and they had good practices. And so,
9 you know, we have what we call a particular responsible
10 party; but they are not fully liable for how the spill or
11 how the disposal was made at the site. But they're still
12 responsible, and they will clean pay for clean-up.

13 MR. PYNES: Can you say who that is?

14 MR. SANTOS: Who the potential responsible
15 party is?

16 MR. PYNES: Yeah.

17 MR. SANTOS: We have a list of several of
18 them. Their names are in the order that was sent.
19 There's a -- I don't know right offhand.

20 MR. MILLER: They were Dow and Harper and
21 Seagulf who is tied to Hercules in some kind of way. Oh,
22 LDL, who is a current owner of most of it. And then,
23 there are also several individuals that own one of those
24 tracts that didn't really have anything to do with.

25 MR. PYNES: Y'all have a list compiled?



1 MR. MILLER: Yes, it is the list.

2 MR. SANTOS: And, you know, it's on the
3 unilateral order, the people that are -- you know, were
4 ordered to clean out the site and that information is
5 available and in the repository.

6 MR. MILLER: Yes, it is. And I can -- if
7 anybody would like to have it, I can e-mail it to you;
8 and my e-mail and phone number are on some of these
9 handouts. And so, send me an e-mail; and I will be
10 glad.

11 MS. HOEY: Is it on the website?

12 MR. SANTOS: I don't think that the
13 unilateral order is on the website.

14 MR. MOTLEY: I have a question.

15 MR. SANTOS: Yes, sir.

16 MR. MOTLEY: Is the property still mainly
17 used by the responsible parties, or is it just open land
18 from this point forward and monitored? Can it be
19 developed with restrictions on it?

20 MR. SANTOS: It can be developed with the
21 restrictions on it. I mean, as Gary indicated, with
22 certain, you know, precautions. We have restrictions
23 outside of where the plume is also not drilling or
24 putting in wells in some of those areas. So, they're not
25 the same restrictions; but there are restrictions. We



1 have a property owner out there --

2 MR. MILLER: That's LDL.

3 MR. SANTOS: LDL. They still own that
4 property, and they can develop it for commercial or
5 industrial uses. So, there will be -- the owners still
6 own that property.

7 MR. MOTLEY: Is there any impact if we had
8 a high coastal tide with hurricane or storage surges to
9 worry about that plume heading off the surface area.

10 MR. SANTOS: We don't think that that would
11 be the case. We had a hurricane that came through.

12 MR. MILLER: The site was under water
13 several years ago. And, of course, we don't have any
14 information before then; but, you know, we can see what
15 it is after that. And, you know, this is down below
16 ground and when we have tides coming in, it will affect
17 the flow. But that zone is tight. So, it's not going to
18 move very fast. So --

19 MR. CASTILLE: Gary, let me ask you, the
20 contaminants other than the plume, now what -- give us an
21 update -- a clear update again. We had some ground
22 surface contamination, right?

23 MR. MILLER: Yeah, there were metals.
24 There were PCBs.

25 MR. CASTILLE: They're not cleaned up



1 though?

2 MR. MILLER: No. They were at low levels;
3 and based on risk assessment, the risk was -- it was low
4 risk. They are there, but the risk was low. So -- and
5 they were scattered. It's not like every sample had them
6 and there were a number of samples that not detected and
7 these hits were just kind of scattered around.

8 MR. PYNES: If you do Option 2 and do the
9 five-year testing, does the city get follow-up reports on
10 that?

11 MR. SANTOS: Yes. Yes. And the EPA will
12 be doing the review together with the state and the
13 responsible parties. Again, they will pay for the work
14 and the evaluation that is done and the city is welcome
15 to join.

16 MR. MILLER: There will be sample records.
17 Right now there's a distribution list that all those
18 documents go to. So, we can certainly add the city on to
19 that.

20 MR. CASTILLE: I got a question -- go
21 ahead.

22 MR. SANTOS: We have a repository where we
23 put out all the information that's gathered from the
24 site. And when they're doing the ground water
25 monitoring, that data, we will be putting in the



1 repository. We have documents on the site available to
2 the public.

3 MR. CASTILLE: Gary, between Bridge Harbor
4 and the site, there is an existing old marina.

5 MR. MILLER: Right.

6 MR. CASTILLE: With the water up in there.

7 MR. MILLER: Right.

8 MR. CASTILLE: That area, what kind of
9 investigation -- ground results did you get? I know
10 these people had to experience the flow off the site into
11 that property. Okay? So, I really -- you know, and I
12 watched it for 30 years and I really am surprised that
13 there's not a whole lot more contamination in the water
14 or in the -- you know, the mud below the water line.

15 MR. MILLER: You know, one of our concerns
16 was like, for instance, the settlement right here on
17 site. Here's the former marina Bob had just mentioned.
18 There were -- these samples over here go from the surface
19 to a depth of about 2 feet, and the purpose of these
20 things was to get to extend. And so, that does that all
21 these over here plus over here. Those are the small low
22 one-inch sample for lead; and those were all low. Now,
23 there is some contamination over here; but again, it's
24 low and scattered.

25 MR. CASTILLE: We've experienced, you know,



1 25 years probably since we sealed this deal of
2 contamination airborne primarily. Okay? You know,
3 coming towards the Bridge Harbor Subdivision, the homes
4 over there. And I am really surprised the big area over
5 there, what's left of the big water area, isn't highly,
6 highly contaminated. That really puzzles me.

7 MR. MILLER: Yeah, those numbers up there
8 are lead concentrations. So, I will just -- like -- let
9 me point to them. Like this one right here, that is -- I
10 apologize. That's not on this one. Anyway, I do recall
11 that all of these samples were all under 20 parts per
12 million.

13 MR. CASTILLE: We had airborne covering the
14 whole subdivision for years, way before I got there.
15 Going back to what? The Sixties or whatever. That's why
16 I'm really surprised.

17 MR. MILLER: You know, we did find, there's
18 zinc and there's an aluminum and iron, you know; but as
19 far as the more toxic metals like lead and organic type
20 things, we just didn't find it.

21 MR. CASTILLE: It was lead paint that was
22 removed from those barges for many years, 40 years, you
23 know.

24 MR. ARIPSE: I got a question. A lot of
25 this stuff that you're mentioning, the environment, what



1 are some of the health effects that you would see if you
2 came in contact with this stuff. What can you expect?

3 MR. MILLER: Well, just in general -- and
4 maybe the state health folks can help. In general, those
5 are carcinogens and some of them are very nasty
6 carcinogens. They used to call them toxic. Now, we call
7 them mind carcinogens. They're not cancerous but other
8 type actions. If they were high enough in concentration,
9 they would be very toxic and very much cancerous.

10 MR. ARIPSE: A lot of them accumulate.
11 Even though it's just a small amount over time, they will
12 accumulate in the body and reach that peak. A lot of
13 them that you mentioned are like that. What are some of
14 the effects that you see besides cancer?

15 DR. BRADFORD: Between the different metals
16 and everything you can have a whole slew of different
17 kind of effects. You can give the information about each
18 chemical if you wanted to.

19 MR. ARIPSE: Just for the residents
20 themselves that are experiencing that stuff.

21 DR. BRADFORD: It's really hard to say I
22 have this, and it's caused from this. It's not like some
23 kind of surgery. I can do biological testing, but a lot
24 of this has been so long ago, especially the metals, they
25 don't see it.



1 MR. MILLER: One thing I should say this
2 was done as part of the ecological testing where we were
3 evaluating the impact on the environment. What we did is
4 we got these -- I forget the name, like a small shrimp,
5 and another type of worm. We put those guys in with that
6 settlement and mixed them in. We did 21 days and 28 days
7 and measured their growth and their reproduction and
8 whether they lived or not. And what we found is
9 basically they were exactly the same as they did on the
10 background levels.

11 And these samples that we picked were
12 areas that had the higher concentrations. It's areas
13 that we were concerned about.

14 MR. PYNES: The question is: Did you eat
15 the shrimp?

16 MR. MILLER: And this is all environment.
17 It's not human health. What I'm saying is these guys --
18 and they did it eat. So -- but no, as far as the human
19 health, these numbers were -- some of them were above are
20 shrimp levels. That's why we went through the risk
21 assessment, based on risk assessment. It was -- for
22 instance, on the soil it was one in a million additional
23 cancers. And our -- the acceptable risk range we use is
24 between one and 10,000 additional cancers and one in a
25 million. So, it was right at the very top end of our --



1 I should say low end of the acceptable risk rate. So --

2 MS. MIRELES: Do you know if there's been
3 any allegations over there as far as the cancer or
4 whatever the case may be? Do you know?

5 MR. CASTILLE: Well, yeah, we had a lot of
6 people dying there of cancer, No. 1. I got a history of
7 30 years over there. Okay? I have more experience than
8 anybody in the area. Okay. And if you saw the video and
9 the still pictures we had today that we supplied to the
10 EPA, you would be astonished at what the city allowed and
11 the county and the state for 40 years. Finally these
12 people came in and stepped in. Okay. But to see a
13 video -- I mean, daily, day after day of the sandblasting
14 barges that you couldn't -- you know, the house would be
15 full of benzene, styrene, every agent they used for many,
16 many years.

17 Okay. But going back, we have had
18 people die of cancer in there. They probably didn't
19 realize it was from here. Okay. But it's -- it was one
20 of the worst experiences of my life, you know. Of
21 course, things have settled down. We went through
22 litigation. You know that. Okay? And it was a very
23 trying costly, you know, life experience, which you don't
24 want to go through. Okay? And like I say, we got -- we
25 supplied the EPA with about thousands of pages of



1 documents that we had to pay for to defend our
2 litigation. I think \$50,000 just for, you know,
3 obtaining all the information we could get at the time
4 and I did supply to the EPA. These people came to the
5 house for months on end including Gary to xerox
6 everything we had.

7 But going back it's one of the worst
8 experience anyone could go through. In fact, they had
9 barges in the intercostal waterway that they would
10 deliberately flush the barges out and all the concentrate
11 and all the debris would go directly into the intercostal
12 waterway. We had thousands of fishes die along Bridge
13 Harbor in there because of that. We had people suited up
14 in their white uniforms while they're discharging the
15 water, extracting the water from the barges. They were
16 all suited up, and here we are 200 feet away with no
17 protection whatsoever. Okay? We would come home late at
18 night after running our business. We would have to leave
19 the house because they were venting barges all night
20 long.

21 So, not only the ground contamination
22 but the airborne was as bad as you could get for 30
23 years, just to give you a little background. You know.
24 Chris knows. He's been there for many years. It was a
25 bad deal.



1 MR. PYNES: The last thing that I will say,
2 and I'll be quiet. I think -- I won't speak out of turn
3 for the Councilwoman Mireles; but from our perspective,
4 there's no acceptable level of risk, whether it's one
5 part per million to one part per 10,000 for the safety of
6 our community for the chance this could be a danger for
7 them. That's my perspective. Why would we risk
8 somebody's health based on somebody else's negligence?
9 There is no acceptable level of risk for your community
10 and our citizens out there. Lots of people live out
11 there and vacation there. So, I just want to say that.

12 MR. SANTOS: Okay. Thank you. Thank you
13 for your time. We'll provide responses to that. You
14 know, anything else you want to say later in writing or
15 additional comments or, you know, statements, we will
16 take them and consider them and do an official response
17 to them. We gave the response on some things, but we
18 can -- we can give you a more technical or risk based
19 response to some of the concerns that you have. All
20 right. Thank you.

21 MR. CASTILLE: I'd like to thank the EPA.
22 They finally came in and we're getting somewhere because
23 prior to them, we got nowhere. We'll work with them down
24 the line.

25 MR. SANTOS: Thank you very much. We'll --



1 we can stay longer if you have questions.

2 MR. PYNES: It's been a long day of
3 budget. Again, we appreciate all of you being here and
4 taking the time to be here. And again, thank you for
5 coming and thank you for your questions and concerns.

6 (Hearing concluded.)
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5 AUGUST 4, 2011

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